

WHAT IS CLAIMED IS:

1. A light emitting device comprising a thin film transistor and a capacitor storage,

5 wherein the capacitor storage has a connection wiring line, a capacitance wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line, the connection wiring line being formed on an interlayer insulating film that covers a gate electrode of the thin film transistor,

10 wherein the connection wiring line is connected to a source region or a drain region of the thin film transistor.

2. A light emitting device as claimed in any one of claim 1, wherein the insulating film is formed by anodization.

15 3. A light emitting device as claimed in any one of claims 1, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

4. An electric appliance comprising the light emitting device according to claim 1, wherein the electronic appliance is selected from the group consisting of an
20 organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

5. A light emitting device comprising a thin film transistor and a capacitor
25 storage,

wherein the capacitor storage has a connection wiring line, a capacitance wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line, the connection wiring line being formed on an interlayer insulating film that covers a gate electrode of the thin film transistor,

30 wherein the connection wiring line is connected to a source region or a drain

region of the thin film transistor, and

wherein the connection wiring line overlaps an active layer of the thin film transistor.

5 6. A light emitting device as claimed in any one of claim 5, wherein the insulating film is formed by anodization.

7. A light emitting device as claimed in any one of claim 5, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

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8. An electric appliance comprising the light emitting device according to claim 5, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video
15 camera, and a cellular phone.

9. A light emitting device comprising a thin film transistor, a capacitor storage, and an organic light emitting diode,

wherein the capacitor storage has a connection wiring line, a capacitance
20 wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line, the connection wiring line being formed on an interlayer insulating film that covers a gate electrode of the thin film transistor, the capacitance wiring line being formed on the same interlayer insulating film on which a pixel electrode of the organic light emitting diode is formed,

25 wherein the connection wiring line is connected to a source region or a drain region of the thin film transistor.

10. A light emitting device as claimed in any one of claim 9. wherein the insulating film is formed by anodization.

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11. A light emitting device as claimed in any one of claim 9, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

12. An electric appliance comprising the light emitting device according to
5 claim 9, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

10 13. A light emitting device comprising a thin film transistor, a capacitor storage, and an organic light emitting diode,

wherein the capacitor storage has a connection wiring line, a capacitance wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line, the connection wiring line being formed on an interlayer insulating
15 film that covers a gate electrode of the thin film transistor, the capacitance wiring line being formed on the same interlayer insulating film on which a pixel electrode of the organic light emitting diode is formed,

wherein the connection wiring line is connected to a source region or a drain region of the thin film transistor,

20 wherein the luminance of the organic light emitting diode is controlled by an analog video signal.

14. A light emitting device as claimed in any one of claim 13, wherein the insulating film is formed by anodization.

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15. A light emitting device as claimed in any one of claim 13, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

16. An electric appliance comprising the light emitting device according to
30 claim 13, wherein the electronic appliance is selected from the group consisting of an

organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

5 17. A light emitting device comprising a source line, a power supply line, a switching thin film transistor, a driving thin film transistor, a capacitor storage, and an organic light emitting diode,

 wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a
10 gate electrode of the driving thin film transistor through a connection wiring line,

 wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

 wherein the connection wiring line is formed on an interlayer insulating film
15 that covers a gate electrode of the switching thin film transistor,

 wherein the capacitor storage has the connection wiring line, a capacitance wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line.

20 18. A light emitting device as claimed in any one of claim 17, wherein the insulating film is formed by anodization.

 19. A light emitting device as claimed in any one of claim 17, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

25 20. An electric appliance comprising the light emitting device according to claim 17, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video
30 camera, and a cellular phone.

21. A light emitting device having a source line, a power supply line, a switching thin film transistor, a driving thin film transistor, a capacitor storage, and an organic light emitting diode,

5 wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a
10 pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

wherein the capacitor storage has a capacitance electrode, the power supply line, and an insulating film formed between the capacitance electrode and the power supply
15 line, the capacitance electrode being formed of the same conductive film as the gate electrode of the driving thin film transistor.

22. A light emitting device as claimed in any one of claim 21, wherein the insulating film is formed by anodization.

20 23. A light emitting device as claimed in any one of claim 21, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

24. An electric appliance comprising the light emitting device according to
25 claim 21, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

30 25. A light emitting device having a source line. a power supply line. a

switching thin film transistor, a driving thin film transistor, a capacitor storage, and an organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a
5 gate electrode of the driving thin film transistor through a connection wiring line,

wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film
10 that covers a gate electrode of the switching thin film transistor,

wherein the capacitor storage has the connection wiring line, a capacitance wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line, and

wherein the connection wiring line overlaps an active layer of the switching
15 thin film transistor.

26. A light emitting device as claimed in any one of claim 25, wherein the insulating film is formed by anodization.

20 27. A light emitting device as claimed in any one of claim 25, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

28. An electric appliance comprising the light emitting device according to claim 25, wherein the electronic appliance is selected from the group consisting of an
25 organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

29. A light emitting device having a source line, a power supply line, a
30 switching thin film transistor, a driving thin film transistor, a capacitor storage, and an

organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

5 wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

10 wherein the capacitor storage has a capacitance electrode, the power supply line, and an insulating film formed between the capacitance electrode and the power supply line, the capacitance electrode being formed of the same conductive film as the gate electrode of the driving thin film transistor, and

wherein the connection wiring line overlaps an active layer of the switching
15 thin film transistor.

30. A light emitting device as claimed in any one of claim 29, wherein the insulating film is formed by anodization.

20 31. A light emitting device as claimed in any one of claim 29, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

32. An electric appliance comprising the light emitting device according to claim 29, wherein the electronic appliance is selected from the group consisting of an
25 organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

33. A light emitting device having a source line, a power supply line, a
30 switching thin film transistor, a driving thin film transistor, a capacitor storage, and an

organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

5 wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

10 wherein the capacitor storage has the connection wiring line, a capacitance wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line,

wherein a drain current of the driving thin film transistor is controlled by an analog video signal inputted to the source line and the drain current flows into the organic
15 light emitting diode.

34. A light emitting device as claimed in any one of claim 33, wherein the insulating film is formed by anodization.

20 35. A light emitting device as claimed in any one of claim 33. wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

36. An electric appliance comprising the light emitting device according to claim 33, wherein the electronic appliance is selected from the group consisting of an
25 organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

37. A light emitting device having a source line, a power supply line, a
30 switching thin film transistor, a driving thin film transistor, a capacitor storage, and an

organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

5 wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

10 wherein the capacitor storage has a capacitance electrode, the power supply line, and an insulating film that between the capacitance electrode and the power supply line, the capacitance electrode being formed of the same conductive film as the gate electrode of the driving thin film transistor, and

wherein a drain current of the driving thin film transistor is controlled by an
15 analog video signal inputted to the source line and the drain current flows into the organic light emitting diode.

38. A light emitting device as claimed in any one of claim 37. wherein the insulating film is formed by anodization.

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39. A light emitting device as claimed in any one of claim 37. wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

40. An electric appliance comprising the light emitting device according to
25 claim 37, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

30 41. A light emitting device having a source line, a power supply line, a

switching thin film transistor, a driving thin film transistor, a first capacitor storage, a second capacitor storage, and an organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

wherein the first capacitor storage has the connection wiring line, a capacitance wiring line, and a first insulating film formed between the connection wiring line and the capacitance wiring line,

wherein the second capacitor storage has a capacitance electrode, a semiconductor layer, and a second insulating film formed between the capacitance electrode and the semiconductor layer, the capacitance electrode being formed of the same conductive film as the gate electrode of the driving thin film transistor, and the semiconductor layer being formed at the same time active layers of the switching thin film transistor and the driving thin film transistor are formed.

42. A light emitting device as claimed in any one of claim 41, wherein the insulating film is formed by anodization.

43. A light emitting device as claimed in any one of claim 41, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

44. An electric appliance comprising the light emitting device according to claim 41, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video

camera, and a cellular phone.

45. A light emitting device having a source line, a power supply line, a switching thin film transistor, a driving thin film transistor, a first capacitor storage, a
5 second capacitor storage, and an organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

wherein the driving thin film transistor has a source region and a drain region
10 one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

wherein the first capacitor storage has the connection wiring line, a capacitance
15 wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line,

wherein the second capacitor storage has a capacitance electrode, the power supply line, and the interlayer insulating film formed between the capacitance electrode and the power supply line, the capacitance electrode being formed of the same conductive
20 film as the gate electrode of the driving thin film transistor.

46. A light emitting device as claimed in any one of claim 45, wherein the insulating film is formed by anodization.

25 47. A light emitting device as claimed in any one of claim 45, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

48. An electric appliance comprising the light emitting device according to claim 45, wherein the electronic appliance is selected from the group consisting of an
30 organic light emitting diode display, a digital still camera, a notebook personal computer, a

mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

49. A light emitting device having a source line, a power supply line, a
5 switching thin film transistor, a driving thin film transistor, a first capacitor storage, a second capacitor storage, and an organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

10 wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

15 wherein the first capacitor storage has the connection wiring line, a capacitance wiring line, and a first insulating film formed between the connection wiring line and the capacitance wiring line,

wherein the second capacitor storage has a capacitance electrode, a semiconductor layer, and a second insulating film formed between the capacitance
20 electrode and the semiconductor layer, the capacitance electrode being formed of the same conductive film as the gate electrode of the driving thin film transistor, the semiconductor layer being formed at the same time active layers of the switching thin film transistor and the driving thin film transistor are formed, and

wherein the connection wiring line overlaps the active layer of the switching
25 thin film transistor.

50. A light emitting device as claimed in any one of claim 49. wherein the insulating film is formed by anodization.

30 51. A light emitting device as claimed in any one of claim 49. wherein the

connection wiring line and the pixel electrode are formed from the same conductive film.

52. An electric appliance comprising the light emitting device according to claim 49, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

53. A light emitting device having a source line, a power supply line, a switching thin film transistor, a driving thin film transistor, a first capacitor storage, a second capacitor storage, and an organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

wherein the first capacitor storage has the connection wiring line, a capacitance wiring line, and an insulating film formed between the connection wiring line and the capacitance wiring line,

wherein the second capacitor storage has a capacitance electrode, the power supply line, and the interlayer insulating film formed between the capacitance electrode and the power supply line, the capacitance electrode being formed of the same conductive film as the gate electrode of the driving thin film transistor,

wherein the connection wiring line overlaps the active layer of the switching thin film transistor.

54. A light emitting device as claimed in any one of claim 53, wherein the

insulating film is formed by anodization.

55. A light emitting device as claimed in any one of claim 53, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

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56. An electric appliance comprising the light emitting device according to claim 53, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video
10 camera, and a cellular phone.

57. A light emitting device having a source line, a power supply line, a switching thin film transistor, a driving thin film transistor, a first capacitor storage, a second capacitor storage, a third capacitor storage, and an organic light emitting diode,

15 wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

wherein the driving thin film transistor has a source region and a drain region one of which is connected to the power supply line and the other of which is connected to a
20 pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

wherein the first capacitor storage has the connection wiring line, a capacitance wiring line, and a first insulating film formed between the connection wiring line and the
25 capacitance wiring line,

wherein the second capacitor storage has a capacitance electrode, a semiconductor layer, and a second insulating film formed between the capacitance electrode and the semiconductor layer, the capacitance electrode being formed of the same conductive film as the gate electrode of the driving thin film transistor, the semiconductor
30 layer being formed at the same time active layers of the switching thin film transistor and

the driving thin film transistor are formed,

wherein the third capacitor storage has the capacitance electrode, the power supply line, and the interlayer insulating film formed between the capacitance electrode and the power supply line.

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58. A light emitting device as claimed in any one of claim 57, wherein the insulating film is formed by anodization.

59. A light emitting device as claimed in any one of claim 57, wherein the
10 connection wiring line and the pixel electrode are formed from the same conductive film.

60. An electric appliance comprising the light emitting device according to claim 57, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a
15 mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

61. A light emitting device having a source line, a power supply line, a switching thin film transistor, a driving thin film transistor, a first capacitor storage, a
20 second capacitor storage, a third capacitor storage, and an organic light emitting diode,

wherein the switching thin film transistor has a source region and a drain region one of which is connected to the source line and the other of which is connected to a gate electrode of the driving thin film transistor through a connection wiring line,

wherein the driving thin film transistor has a source region and a drain region
25 one of which is connected to the power supply line and the other of which is connected to a pixel electrode of the organic light emitting diode,

wherein the connection wiring line is formed on an interlayer insulating film that covers a gate electrode of the switching thin film transistor,

wherein the first capacitor storage has the connection wiring line, a capacitance
30 wiring line, and a first insulating film formed between the connection wiring line and the

capacitance wiring line,

wherein the second capacitor storage has a capacitance electrode, a semiconductor layer, and a second insulating film formed between the capacitance electrode and the semiconductor layer, the capacitance electrode being formed of the same
5 conductive film as the gate electrode of the driving thin film transistor, the semiconductor layer being formed at the same time active layers of the switching thin film transistor and the driving thin film transistor are formed,

wherein the third capacitor storage has the capacitance electrode, the power supply line, and the interlayer insulating film formed between the capacitance electrode
10 and the power supply line, and

wherein the connection wiring line overlaps the active layer of the switching thin film transistor.

62. A light emitting device as claimed in any one of claim 61, wherein the
15 insulating film is formed by anodization.

63. A light emitting device as claimed in any one of claim 61, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

20 64. An electric appliance comprising the light emitting device according to claim 61, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

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65. A light emitting device comprising a plurality of pixels each having a thin film transistor and a capacitor storage,

wherein all of capacitor storages of the plurality of pixels share one capacitance wiring line,

30 wherein each of capacitor storages of the plurality of pixels has a connection

wiring line and an insulating film, the connection wiring line being formed on an interlayer insulating film that covers a gate electrode of the thin film transistor, the insulating film being formed between the connection wiring line and the one capacitance wiring line,

wherein the connection wiring line is connected to a source region or a drain
5 region of the thin film transistor, and

wherein the one capacitance wiring line overlaps an active layer of the thin film transistor of each of the plurality of pixels.

66. A light emitting device as claimed in any one of claim 65, wherein the
10 insulating film is formed by anodization.

67. A light emitting device as claimed in any one of claim 65, wherein the connection wiring line and the pixel electrode are formed from the same conductive film.

15 68. An electric appliance comprising the light emitting device according to claim 65, wherein the electronic appliance is selected from the group consisting of an organic light emitting diode display, a digital still camera, a notebook personal computer, a mobile computer, a portable image reproducing device, a goggle type display, a video camera, and a cellular phone.

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